

**Statement for the Record
C. Paul Robinson, Director
Sandia National Laboratories**

**United States House of Representatives
Select Committee on Homeland Security**

**Field Hearing in Los Angeles, California
June 21, 2003**

Mr. Chairman and distinguished members of the committee, thank you for the opportunity to submit this statement for the record. I will discuss Sandia National Laboratories' support of maritime security for the ports of Los Angeles and Long Beach.

I am Paul Robinson, director of Sandia National Laboratories. Sandia is a multiprogram laboratory of the U.S. Department of Energy's National Nuclear Security Administration (NNSA). We are an *applied science and engineering* laboratory with a focus on developing technical solutions to the most challenging problems that threaten peace and freedom.

As early as last summer, the cities of Los Angeles and Long Beach took action on their own initiative to begin addressing in a comprehensive way the threat of maritime terrorism. Together, these ports handle forty percent of the import commerce into the United States. Consequently, port security here is not merely a local concern; it is a matter of national, and indeed, global importance.

More than a year ago, Long Beach and Los Angeles formed a working group with the U.S. Coast Guard, U.S. Customs, and the maritime industry to begin implementing Operation Safe Commerce, even before the federal grant funding was available. They should be commended for moving aggressively on this challenge.

In December 2002, Los Angeles and Long Beach each entered into a funds-in agreement with Sandia National Laboratories to provide systems engineering oversight for their Operation Safe Commerce activities. We helped them prepare their joint Operation Safe Commerce Cooperative Agreement grant proposal, and we are conducting Security Effectiveness Assessments as part of that work. We will provide technical project management and support for planning, evaluating, installing, and testing security solutions and upgrades for them and for other ports and locations along the cargo path.

Sandia has a fifty-year heritage in security systems for our nation's nuclear weapons. We are the principal NNSA laboratory responsible for developing the risk assessment methodologies and the systems solutions to protect nuclear weapons and nuclear materials at facilities and during transport. For more than a quarter of a century, Sandia has conducted the International Training Course on Physical Protection of Nuclear Facilities and Materials for the International Atomic Energy Agency.

Sandia is a major resource for security expertise and counsel on high-consequence assets. Sandia's assistance in security matters has been widely sought in recent years by numerous agencies including the Department of Defense, the National Institute of Justice, the Secret Service, the Federal Aviation Administration, state and federal corrections systems, public school systems, state and local governments, and the 2002 Winter Olympic Games.

Sandia National Laboratories is the systems and program integrator for "Second Line of Defense," a cooperative threat reduction program with Russia and several other nations. The objective of the Second Line of Defense program is to prevent smuggling of nuclear materials or weapons out of the responsible nation at land crossings, airports, and seaports. We are also involved in an extension of the Second Line of Defense program to support the U.S. Customs Service's Container Security Initiative at foreign megaports to pre-screen container cargo bound for the United States.

Sandia's work for the ports of Los Angeles and Long Beach is managed by the same leadership team that supports the Second Line of Defense and megaports programs. The project director, Charles Massey, is a graduate of the U.S. Merchant Marine Academy and a PhD health physicist. During his maritime career, Dr. Massey sailed on a number of different types of vessels and advanced his license to Chief Mate. He is today a captain in the U.S. Naval Reserve. All-in-all, he has an excellent background for this work.

Project manager Richard Wayne has thirty-two years of experience with security of nuclear weapons in both Navy and Air Force commands as well as fifteen years of experience leading "red team" technical evaluations of military installation security systems.

Our approach to the Operation Safe Commerce project at Long Beach and Los Angeles is a rigorous one. We are starting with an in-depth threat analysis and security effectiveness assessment, which will serve as our baseline for identifying and recommending security upgrades,

both in terms of operational concepts and in terms of technology. We will then help evaluate solution prototypes and oversee the implementation and integration of system solutions. The first phase of our work will focus on local port security; Phase II will involve the entire supply chain.

The Security Effectiveness Assessment process we use is derived from methodologies we developed over many years to help protect nuclear weapons and nuclear facilities. The technique has been adapted for the protection of other high-consequence assets in both the defense and civil sectors. For example, Sandia tailored a security risk assessment methodology for use by city water utilities. We have used similar strategies to evaluate risks for other critical infrastructures such as nuclear power-generation plants, chemical storage sites, and dams.

Based on the Security Effectiveness Assessment, we will assist and advise the ports in their selection of appropriate technologies and procedures for recommended security upgrades. Sandia will define a test plan and perform test oversight as an independent observer and evaluator. Federally funded research and development centers like Sandia have a long heritage of providing objective technical counsel to government entities facing a confusing assortment of available options.

There is some urgency to deploy enhanced security systems and operational processes as soon as practicable. Operation Safe Commerce is not a research and development program, but rather, an assessment and demonstration program to identify security enhancements that can be implemented in the near term. Other federally sponsored programs are underway that focus on longer-term research and development on advanced technologies that can be engineered and deployed to improve port and border security.

Sandia is deeply involved in a variety of research and development efforts targeted to the emerging threats that will challenge our nation's borders. We have already made significant contributions to homeland security with sensor systems for chemical, biological, radiological, and explosive materials. For example, we developed a portable sensor for first responders that is configured to detect toxins such as ricin and botulinum. And we are demonstrating systems for protecting against chemical or biological attacks in public facilities such as airport terminals and subway stations.

We also have had good success with the design and development of spectral sensor systems that can identify radioactive materials quickly and accurately as they pass through portals. We are hopeful that advanced nuclear sensor technologies currently demonstrable in the laboratory can ultimately be engineered into deployable systems that can be mass-produced by industry for border applications. In fact, as a result of our involvement with Operation Safe Commerce, Sandia has entered into discussions with private industry to license one of our software applications for nuclear material detection.

The world has indeed changed, and the challenge of securing our borders and ports against new threats — while not significantly impeding the free flow of commerce — is formidable. Operation Safe Commerce is an important component of the nation's response to this challenge. We at Sandia National Laboratories are pleased to be part of the team effort with the ports of Los Angeles and Long Beach, the U.S. Coast Guard, U.S. Customs Service, and the marine cargo industry to meet this challenge.

Thank you, Mr. Chairman, for this opportunity to submit a statement.

WITNESS DISCLOSURE INFORMATION

Witness name: C. Paul Robinson

Capacity in which appearing: Representative of a non-government entity

Name of entity being represented: Sandia National Laboratories (GOCO)

Position held: President and Laboratories Director

Parent organization (managing contractor): Lockheed Martin Corporation

Federal contract: Management and operating contract between Sandia Corporation and U.S. Department of Energy, DE-AC04-94AL85000.

FY2001 cost: \$1,580,187,000; negotiated fee: \$16,300,000.

FY2002 cost: \$1,684,552,000; negotiated fee: \$17,270,000.

FY2003 estimated cost: \$2,044,174,000; negotiated fee: \$21,500,000.

Curriculum Vitae:

Dr. C. Paul Robinson is President of Sandia Corporation and Director of Sandia National Laboratories, with principal sites in Albuquerque, New Mexico and Livermore, California.

Joining Sandia in 1990, Robinson was Director and Vice President before becoming President in 1995.

Ambassador Robinson served as Chief Arms Control Negotiator from 1988–90 and headed the U.S. Delegation to the Nuclear Testing Talks in Geneva. He was appointed by President Ronald Reagan, confirmed by the US Senate, and reappointed by President George Bush. These negotiations produced protocols to the Threshold Test Ban Treaty and the Peaceful Nuclear Explosions Treaty, which were ratified unanimously by the Senate.

From 1985–88, Robinson was Senior Vice President, Principal Scientist, and Board Member of Ebasco Services, Inc., a major engineering and construction firm. He spent most of his early career (1967–85) at Los Alamos National Laboratory, where he led the laboratory's defense programs. He is a longstanding member of the Strategic Advisory Group for the Commander-in-Chief, U.S. Strategic Command. Robinson has served on DoD's Threat Reduction Advisory Committee since 1998. He was Chair of the Presidential Technical Advisory Group on Verification of Warhead Dismantlement and Special Nuclear Materials Controls. He previously served on the Scientific Advisory Group on Effects for the Defense Nuclear Agency, on Defense Science Board studies, and has advised other government agencies.

Dr. Robinson received the Outstanding Public Service Medal from the Joint Chiefs of Staff and was elected to the National Academy of Engineering. He currently serves on several community and educational boards, including the Great Southwest Council of the Boy Scouts of America, the Explora Science Museum, and the Florida State University Research Foundation's Board of Trustees. He is also a trustee of the Kazakhstan Nonproliferation Institute. Robinson holds a B.S. in Physics from Christian Brothers College, a Ph.D. in Physics from Florida State University, and an honorary doctorate from Christian Brothers University.